CHAPTER 1

The Power of Markets:

Who feeds Paris?

In 1989, as the Berlin Wall was toppling, Douglas Ivester, head of Coca-Cola Europe (and later CEO), made a snap decision. He sent his sales force to Berlin and told them to start passing out Coke. Free. In some cases, the Coca-Cola representatives were literally passing bottles of soda through holes in the Wall. He recalls walking around Alexanderplatz in East Berlin at the time of the upheaval, trying to gauge whether there was any recognition of the Coke brand. "Everywhere we went, we asked people what they were drinking, and whether they liked Coca-Cola. But we didn't even have to say the name! We just shaped our hands like the bottle, and people understood. We decided we would move as much Coca-Cola as we could, as fast as we could—even before we knew how we would get paid."[1]

Coca-Cola quickly set up business in East Germany, giving free coolers to merchants who began to stock the "real thing." It was a money-losing proposition in the short run; the East German currency was still worthless—scraps of paper to the rest of the world. But it was a brilliant business decision made faster than any government body could ever hope to act. By 1995, per capita consumption of Coca-Cola in the former East Germany had risen to the level in West Germany, which was already a strong market.

In a sense, it was Adam Smith's invisible hand passing Coca-Cola through the Berlin Wall. Coke representatives weren't undertaking any great humanitarian gesture as they passed beverages to the newly liberated East Germans. Nor were they making a bold statement about the future of communism. They were looking after business—expanding their global market, boosting profits, and making shareholders happy. And that is the punch line of capitalism: The market aligns incentives in such a way that individuals working for their own best interest—passing out Coca-Cola, spending years in graduate school, planting a field of soybeans, designing a radio that will work in the shower—leads to a thriving and ever-improving standard of living for most (though not all) members of society.

Economists sometimes ask, "Who feeds Paris?"—a rhetorical way of drawing attention to the mind-numbing array of things happening every moment of every day to make a modern economy work. Somehow the right amount of fresh tuna makes its way from a fishing fleet in the South Pacific to a restaurant on the Rue de Rivoli. A neighborhood fruit vendor has exactly what his customers want every morning—from coffee to fresh papayas—even though those products may come from ten or fifteen different countries. In short, a complex economy involves billions of transactions every day, the vast majority of which happen without any direct government involvement. And it is not just that things get done; our lives grow steadily better in the process. It is remarkable enough that we can now shop for a television twenty-four hours a day from the comfort of our own homes; it is equally amazing that in 1971 a twenty-five-inch color television set cost an average worker 174 hours of wages. Today, a twenty-five-inch color television set—one that is more dependable, gets more channels, and has better reception—costs the average worker about twenty-three hours of pay.

If you think that a better, cheaper television set is not the best measure of social progress (a reasonable point, I concede), then perhaps you will be moved by the fact that, during the twentieth century, American life expectancy climbed from forty-seven years to seventy-

seven, infant mortality plunged by 93 percent, and we wiped out or gained control over diseases such as polio, tuberculosis, typhoid, and whooping cough.[2]

Our market economy deserves a lot of the credit for that progress. There is an old Cold War story about a Soviet official who visits an American pharmacy. The brightly lit aisles are lined with thousands of remedies for every problem from bad breath to toe fungus. "Very impressive," he says. "But how can you make sure that every store stocks all of these items?" The anecdote is interesting because it betrays a total lack of understanding of how a market economy works. In America, there is no central authority that tells stores what items to stock, as there was in the Soviet Union. Stores sell the products that people want to buy, and, in turn, companies produce items that stores want to stock. The Soviet economy failed in large part because government bureaucrats directed everything, from the number of bars of soap produced by a factory in Irktusk to the number of university students studying electrical engineering in Moscow. In the end, the task proved overwhelming.

Of course, those of us accustomed to market economies have an equally poor understanding of communist central planning. I was once part of an Illinois delegation visiting Cuba. Because the visit was licensed by the U.S. government, each member of die delegation was allowed to bring back $100 worth of Cuban merchandise, including cigars. Having been raised in the era of discount stores, we all set out looking for the best price on Cohibas so that we could get the most bang for our $100 allowance. After several fruitless hours, we discovered the whole point of communism: The price of cigars was the same everywhere. There is no competition between stores because there is no profit as we know it. Every store sells cigars—and everything else for that matter—at whatever price Fidel Castro (or his brother Raul) tells them to. And every shopkeeper selling cigars is paid the government wage for selling cigars, which is unrelated to how many cigars he or she sells.

Gary Becker, a University of Chicago economist who won the Nobel Prize in 1992, has noted (borrowing from George Bernard Shaw) that "economy is the art of making the most of life." Economics is the study of how we do that. There is a finite supply of everything worth having: oil, coconut milk, perfect bodies, clean water, people who can fix jammed photocopy machines, etc. How do we allocate these things? Why is it that Bill Gates owns a private jet and you don't? He is rich, you might answer. But why is he rich? Why does he have a larger claim on the world's finite resources than everyone else? At the same time, how is it possible in a country as rich as the United States—a place where Alex Rodriguez can be paid $275 million to play baseball—that one in five children is poor or that some adults are forced to rummage through garbage cans for food? Near my home in Chicago, the Three Dog Bakery sells cakes and pastries *only for dogs.* Wealthy professionals pay $16 for birthday cakes for their pets. Meanwhile, the Chicago Coalition for the Homeless estimates that fifteen thousand people are homeless on any given night in that same city.

These kinds of disparities grow even more pronounced as we look beyond the borders of the United States. Three-quarters of the people in Chad have no access to clean drinking water, let alone pastries for their pets. The World Bank estimates that half of the world's population survives on less than $2 a day. How does it all work—or, in some cases, not work?

Economics starts with one very important assumption: Individuals act to make themselves as well off as possible. To use the jargon of the profession, individuals seek to maximize their own utility, which is a similar concept to happiness, only broader. I derive utility from getting a typhoid immunization and paying taxes. Neither of these things makes me particularly happy, but they do keep me from dying of typhoid or going to jail. That, in the long run, makes me better off. Economists don't particularly care what gives us utility; they simply accept that each of us has his or her own "preferences." I like cof-

fee, old houses, classic films, dogs, bicycling, and many other things. Everyone else in the world has preferences, which may or may not have anything in common with mine.

Indeed, this seemingly simple observation that different individuals have different preferences is sometimes lost on otherwise sophisticated policymakers. For example, rich people have different preferences than poor people do. Similarly, our individual preferences may change over the course of our life cycle as we (we hope) grow wealthier. The phrase "luxury good" actually has a technical meaning to economists; it is a good that we buy in increasing quantities as we grow richer—things like sports cars and French wines. Less obviously, concern for the environment is a luxury good. Wealthy Americans are willing to spend more money to protect the environment *as a fraction of their incomes* than are less wealthy Americans. The same relationship holds true across countries; wealthy nations devote a greater share of their resources to protecting the environment than do poor countries. The reason is simple enough: We care about the fate of the Bengal tiger *because we can.* We have homes and jobs and clean water and birthday cakes for our dogs.

Here is a nettlesome policy question: Is it fair for those of us who live comfortably to impose our preferences on individuals in the developing world? Economists argue that it is not, though we do it all the time. When I read a story in the Sunday *New York Times* about South American villagers cutting down virgin rain forest and destroying rare ecosystems, I nearly knock over my Starbucks latte in surprise and disgust. But I am not they. My children are not starving or at risk of dying from malaria. If they were, and if chopping down a valuable wildlife habitat enabled me to afford to feed my family and buy a mosquito net, then I would sharpen my ax and start chopping. I wouldn't care how many butterflies or spotted weasels I killed. This is not to suggest that the environment in the developing world does not matter. It does. In fact, there are many examples of environmental degradation that will make poor countries even poorer in the long run. Cutting

down those forests is bad for the rest of us, too, since deforestation is a major contributor to rising CO_2 emissions. (Economists often argue that rich countries ought to pay poor countries to protect natural resources that have global value.)

Obviously if the developed world were more generous, then Brazilian villagers might not have to decide between destroying the rain forest and buying mosquito nets. For now, the point is more basic: It is simply bad economics to impose our preferences on individuals whose lives are much, much different. This will be an important point later in the book when we turn to globalization and world trade.

Let me make one other important point regarding our individual preferences: Maximizing utility is not synonymous with acting selfishly. In 1999, the *New York Times* published the obituary of Oseola McCarty, a woman who died at the age of ninety-one after spending her life working as a laundress in Hattiesburg, Mississippi. She had lived alone in a small, sparsely furnished house with a black-and-white television that received only one channel. What made Ms. McCarty exceptional is that she was by no means poor. In fact, four years before her death she gave away $150,000 to the University of Southern Mississippi—a school that she had never attended—to endow a scholarship for poor students.

Does Oseola McCarty's behavior turn the field of economics on its head? Are Nobel Prizes being recalled to Stockholm? No. She simply derived more utility from saving her money and eventually giving it away than she would have from spending it on a big-screen TV or a fancy apartment.

Okay, but that was just money. How about Wesley Autrey, a fifty-year-old construction worker in New York City. He was waiting for the subway in Upper Manhattan with his two young daughters in January 2007 when a stranger nearby began having convulsions and then fell on the train tracks. If this wasn't bad enough, the Number 1 train was already visible as it approached the station.

Mr. Autrey jumped on the tracks and shielded the man as five

train cars rolled over both of them, close enough that the train left a smudge of grease on Mr. Autrey's hat. When the train came to a stop, he yelled from underneath, "We're O.K. down here, but I've got two daughters up there. Let them know their father's O.K."[3] This was all to help a complete stranger.

We all routinely make altruistic decisions, albeit usually on a smaller scale. We may pay a few cents extra for dolphin-safe tuna, or send money to a favorite charity, or volunteer to serve in the armed forces. All of these things can give us utility; none would be considered selfish. Americans give more than $200 billion to assorted charities every year. We hold doors open for strangers. We practice remarkable acts of bravery and generosity. None of this is incompatible with the basic assumption that individuals seek to make themselves as well off as possible, however they happen to define that. Nor does this assumption imply that we always make perfect—or even good—decisions. We don't. But each of us does try to make the best possible decision given whatever information is available at the time.

So, after only a few pages, we have an answer to a profound, age-old philosophical question: Why did the chicken cross the road? Because it maximized his utility.

Bear in mind that maximizing utility is no simple proposition. Life is complex and uncertain. There are an infinite number of things that we could be doing at any time. Indeed, every decision that we make involves some kind of trade-off. We may trade off utility now against utility in the future. For example, you may derive some satisfaction from whacking your boss on the head with a canoe paddle at the annual company picnic. But that momentary burst of utility would presumably be more than offset by the disutility of spending many years in a federal prison. (But those are just my preferences.) More seriously, many of our important decisions involve balancing the value of consumption now against consumption in the future. We may spend years in graduate school eating ramen noodles because it dramatically boosts our standard of living later in life. Or, conversely,

we may use a credit card to purchase a big-screen television today even though the interest on that credit card debt will lessen the amount that we can consume in the future.

Similarly, we balance work and leisure. Grinding away ninety hours a week as an investment banker will generate a lot of income, but it will also leave less time to enjoy the goods that can be purchased with that income. My younger brother began his career as a management consultant with a salary that had at least one more digit than mine has now. On the other hand, he worked long and sometimes inflexible hours. One fall we both excitedly signed up for an evening film class taught by Roger Ebert. My brother proceeded to miss *every single class for thirteen weeks.*

However large our paychecks, we can spend them on a staggering array of goods and services. When you bought this book, you implicitly decided not to spend that money somewhere else. (Even if you shoplifted the book, you could have stuffed a Stephen King novel in your jacket instead, which is flattering in its own kind of way.) Meanwhile, time is one of our most scarce resources. At the moment, you are reading instead of working, playing with the dog, applying to law school, shopping for groceries, or having sex. Life is about tradeoffs, and so is economics.

In short, getting out of bed in the morning and making breakfast involves more complex decisions than the average game of chess. (Will that fried egg kill me in twenty-eight years?) How do we manage? The answer is that each of us implicitly weighs the costs and benefits of everything he or she does. An economist would say that we attempt to maximize utility given the resources at our disposal; my dad would say that we try to get the most bang for our buck. Bear in mind that the things that give us utility do not have to be material goods. If you are comparing two jobs—teaching junior high school math or marketing Camel cigarettes—the latter job would almost certainly pay more while the former job would offer greater "psychic benefits," which is a fancy way of saying that at the end of the day you would feel better

about what you do. That is a perfectly legitimate benefit to be compared against the cost of a smaller paycheck. In the end, some people choose to teach math and some people choose to market cigarettes.

Similarly, the concept of cost is far richer (pardon the pun) than the dollars and cents you hand over at the cash register. The real cost of something is what you must give up in order to get it, which is almost always more than just cash. There is nothing "free" about concert tickets if you have to stand in line in the rain for six hours to get them. Taking the bus for $1.50 may not be cheaper than taking a taxi for $7 if you are running late for a meeting with a peevish client who will pull a $50,000 account if you keep her waiting. Shopping at a discount store saves money but it usually costs time. I am a writer; I get paid based on what I produce. I could drive ninety miles to shop at an outlet in Kenosha, Wisconsin, to save $50 on a new pair of dress shoes. Or I could walk into Nordstrom on Michigan Avenue and buy the shoes while I am out for lunch. I generally choose the latter; the total cost is $225, fifteen minutes of my time, and some hectoring from my mother, who will invariably ask, "Why didn't you drive to Kenosha?"

Every aspect of human behavior reacts to cost in some way. When the cost of something falls, it becomes more attractive to us. You can learn that by deriving a demand curve, or you can learn it by shopping the day after Christmas, when people snap up things that they weren't willing to buy for a higher price several days earlier. Conversely, when the cost of something goes up, we use less of it. This is true of everything in life, even cigarettes and crack cocaine. Economists have calculated that a 10 percent decrease in the street price of cocaine eventually causes the number of adult cocaine users to grow by about 10 percent. Similarly, researchers estimated that the first proposed settlement between the tobacco industry and the states (rejected by the U.S. Senate in 1998) would have raised the price of a pack of cigarettes by 34 percent. In turn, that increase would have reduced the number of teenage smokers by a quarter, leading to 1.3 million fewer smoking-related premature deaths among the generation of Americans seventeen

or younger at the time.[4] Of course, society has already raised the cost of smoking in ways that have nothing to do with the price of a pack of cigarettes. Standing outside an office building when it is seventeen degrees outside is now part of the cost of smoking at work.

This broad view of cost can explain some very important social phenomena, one of which is the plummeting birth rate in the developed world. Having a child is more expensive than it was fifty years ago. This is not because it is more expensive to feed and clothe another little urchin around the house. If anything, those kinds of costs have gone down, because we have become far more productive at making basic consumer goods like food and clothing. Rather, the primary cost of raising a child today is the cost of the earnings forgone when a parent, still usually the mother, quits or cuts back on work to look after the child at home. Because women have better professional opportunities than ever before, it has grown more costly for them to leave the workforce. My neighbor was a neurologist until her second child was born, at which point she decided to stay home. *It's expensive to quit being a neurologist.*

Meanwhile, most of the economic benefits of having a large family have disappeared in the developed world. Young children no longer help out on the farm or provide extra income for the family (though they can be taught at a young age to fetch a beer from the refrigerator). We no longer need to have many children in order to ensure that some of them live through childhood or that we have enough dependents to provide for us in retirement. Even the most dour of economists would concede that we derive great pleasure from having children. The point is that it is now more expensive to have eleven of them than it used to be. The data speak to that point: The average American woman had 3.77 children in 1905; she now has 2.07—a 45 percent drop.[5]

There is a second powerful assumption underpinning all of economics: Firms—which can be anything from one guy selling hot dogs to a

multinational corporation—attempt to maximize profits (the revenue earned by selling stuff minus the cost of producing it). In short, firms try to make as much money as possible. Hence, we have an answer to another of life's burning questions: Why did the entrepreneur cross the road? Because he could make more money on the other side.

Firms take inputs—land, steel, knowledge, baseball stadiums, etc.—and combine them in a way that adds value. That process can be as simple as selling cheap umbrellas on a busy corner in New York City when it starts to rain (where do those guys come from?) or as complex as assembling Boeing's 787 Dreamliner (a passenger jet that required 800,000 hours on Cray supercomputers just to design). A profitable firm is like a chef who brings home $30 worth of groceries and creates an $80 meal. She has used her talents to create something that is worth far more than the cost of the inputs. That is not always an easy thing to do. Firms must decide what to produce, how and where to produce it, how much to produce, and at what price to sell what they produce—all in the face of the same kinds of uncertainties that consumers deal with.

How? These are massively complex decisions. One powerful feature of a market economy is that it directs resources to their most productive use. Why doesn't Brad Pitt sell automobile insurance? Because it would be an enormous waste of his unique talents. Yes, he is a charismatic guy who could probably sell more insurance policies than the average salesman. But he is also one of a handful of people in the world who can "open" a movie, meaning that millions of people around the world will go to see a film just because Brad Pitt is in it. That is money in the bank in the risky Hollywood movie business, so studios are willing to pay handsomely to put Brad Pitt in a starring role—about $30 million a film. Insurance agencies would also be willing to pay for the Pitt charisma—but more like $30,000. Brad I'itt will go where he is paid the most. And he will be paid the most in I lollywood because that is where he can add the most value.

Prices are like giant neon billboards that flash important informa-

tion. At the beginning of the chapter, we asked how a restaurant on the Rue de Rivoli in Paris has just the right amount of tuna on most nights. It is all about prices. When patrons start ordering more of the sashimi appetizer, the restaurateur places a larger order with his fish wholesaler. If tuna is growing more popular at other restaurants, too, then the wholesale price will go up, meaning that fishermen somewhere in the Pacific will get paid more for their tuna catch than they used to. Some fishermen, recognizing that tuna now commands a premium over other kinds of fish, will start fishing for tuna instead of salmon. Meanwhile, some tuna fishermen will keep their boats in the water longer or switch to more expensive fishing methods that can now be justified by the higher price their catch will fetch. These guys don't care about upscale diners in Paris. They care about the wholesale price of fish.

Money talks. Why are the pharmaceutical companies scouring the rain forests looking for plants with rare healing properties? Because the blockbuster drugs they may uncover earn staggering amounts of money. Other kinds of entrepreneurial activity take place on a smaller scale but are equally impressive in their own way. For several summers I coached a Little League baseball team near Cabrini Green, which is one of Chicago's rougher neighborhoods. One of our team customs was to go out periodically for pizza, and one of our favorite spots was Chester's, a small shack at the corner of Division and Sedgwick that was a testimony to the resiliency and resourcefulness of entrepreneurs. (It has since been demolished to make way for a new park as part of an aggressive development of Cabrini Green.) Chester's made decent pizza and was always busy. Thus, it was basically an armed robbery waiting to happen. But that did not deter the management at Chester's. They merely installed the same kind of bulletproof glass that one would find at the drive-up window of a bank. The customers placed their money on a small carousel, which was then rotated through a gap in the bulletproof glass. The pizza came out the other direction on the same carousel.

Profit opportunities attract firms like sharks to blood, even when bulletproof glass is required. We look for bold new ways to make money (creating the first reality TV show); failing that, we look to get into a business that is making huge profits for someone else (thereby creating the next twenty increasingly pathetic reality TV shows). All the while, we are using prices to gauge what consumers want. Of course, not every market is easy to enter. When LeBron James signed a three-year $60 million contract with the Cleveland Cavaliers, I thought to myself, "I need to play basketball for the Cleveland Cavaliers." I would have gladly played for $58 million, or, if pressed, for $58,000. Several things precluded me from entering that market, however: (1) I'm five-ten; (2) I'm slow; and (3) when shooting under pressure, I have a tendency to miss the backboard. Why is LeBron James paid $20 million a year? Because nobody else can play like him. His unique talents create a barrier to entry for the rest of us. LeBron James is also the beneficiary of what University of Chicago labor economist Sherwin Rosen dubbed the "superstar" phenomenon. Small differences in talent tend to become magnified into huge differentials in pay as a market becomes very large, such as the audience for professional basketball. One need only be slightly better than the competition in order to gain a large (and profitable) share of that market.

In fact, LeBron's salary is chump change compared to what talk-show host Rush Limbaugh is now paid. He recently signed an eight-year $400 million contract with Clear Channel Communications, the company that syndicates his radio program around the country. Is Rush that much better than other political windbags willing to offer their opinions? He doesn't have to be. He need only be a tiny bit more interesting than the next best radio option at that time of day in order to attract a huge audience—20 million listeners daily. Nobody tunes into their second-favorite radio station, so it's winner-take-all when it comes to listeners and the advertisers willing to pay big bucks to reach them.

Many markets have barriers that prevent new firms from entering,

no matter how profitable making widgets may be. Sometimes there are physical or natural barriers. Truffles cost $500 a pound because they cannot be cultivated; they grow only in the wild and must be dug up by truffle-hunting pigs or dogs. Sometimes there are legal barriers to entry. Don't try to sell sildenafil citrate on a street corner or you may end up in jail. This is not a drug that you snort or shoot up, nor is it illegal. It happens to be Viagra, and Pfizer holds the patent, which is a legal monopoly granted by the U.S. government. Economists may quibble over how long a patent should last or what kinds of innovations should be patentable, but most would agree that the entry barrier created by a patent is an important incentive for firms to make the kinds of investments that lead to new products. The political process creates entry barriers for dubious reasons, too. When the U.S. auto industry was facing intense competition from Japanese automakers in the 1980s, the American car companies had two basic options: (1) They could create better, cheaper, more fuel-efficient cars that consumers might want to buy; or (2) they could invest heavily in lobbyists who would persuade Congress to enact tariffs and quotas that would keep Japanese cars out of the market.

Some entry barriers are more subtle. The airline industry is far less competitive than it appears to be. You and some college friends could start a new airline relatively easily; the problem is that you wouldn't be able to land your planes anywhere. There are a limited number of gate spaces available at most airports, and they tend to be controlled by the big guys. At Chicago's O'Hare Airport, one of the world's biggest and busiest airports, American and United control some 80 percent of all the gates.[6] Or consider a different kind of entry barrier that has become highly relevant in the Internet age: network effects. The basic idea of a network effect is that the value of some goods rises with the number of other people using them. I don't think Microsoft Word is particularly impressive software, but I own it anyway because I spend my days e-mailing documents to people who do like Word (or at least they use it). It would be very difficult to introduce a rival

word-processing package—no matter how good the features or how low the price—as long as most of the world is using Word.

Meanwhile, firms are not just choosing what goods or services to produce but also how to produce them. I will never forget stepping off a plane in Kathmandu; the first thing I saw was a team of men squatting on their haunches as they cut the airport grass by hand with sickles. Labor is cheap in Nepal; lawn mowers are very expensive. The opposite is true in the United States, which is why we don't see many teams of laborers using sickles. It is also why we have ATMs and self-service gas stations and those terribly annoying phone trees ("If you are now frustrated to the point of violence, please press the pound key"). All are cases where firms have automated jobs that used to be done by living beings. After all, one way to raise profits is by lowering the cost of production. That may mean laying off twenty thousand workers or building a plant in Vietnam instead of Colorado.

Firms, like consumers, face a staggering array of complex choices. Again, the guiding principle is relatively simple: What is going to make the firm the most money in the long run?

All of which brings us to the point where producers meet consumers. How much are you going to pay for that doggie in the window? Introductory economics has a very simple answer: the market price. This is that whole supply and demand thing. The price will settle at the point where the number of dogs for sale exactly matches the number of dogs that consumers want to buy. If there are more potential pet owners than dogs available, then the price of dogs will go up. Some consumers will then decide to buy ferrets instead, and some pet shops will be induced by the prospect of higher profits to offer more dogs for sale. Eventually the supply of dogs will match the demand. Remarkably, some markets actually work this way. If I choose to sell a hundred shares of Microsoft on the NASDAQ, I have no choice but to accept the "market price," which is simply the price at which the

number of Microsoft shares for sale on the exchange exactly equals the number of shares that buyers would like to purchase.

Most markets do not look quite so much like the textbooks. There is not a "market price" for Gap sweatshirts that changes by the minute depending on the supply and demand of reasonably priced outerwear. Instead, the Gap, like most other firms, has some degree of market power, which means very simply that the Gap has some control over what it can charge. The Gap could sell sweatshirts for $9.99, eking out a razor-thin profit on each. Or it could sell far fewer sweatshirts for $29.99, but make a hefty profit on each. If you were in the mood to do calculus at the moment, or I had any interest in writing about it, then we would find the profit-maximizing price right now. I'm pretty sure I had to do it on a final exam once. The basic point is that the Gap will attempt to pick a price that leads to the quantity of sales that earn the company the most money. The marketing executives may err either way: They may underprice the items, in which case they will sell out; or they may overprice the items, in which case they will have a warehouse full of sweatshirts.

Actually, there is another option. A firm can attempt to sell the same item to different people at different prices. (The fancy name is "price discrimination.") The next time you are on an airplane, try this experiment: Ask the person next to you how much he or she paid for the ticket. It's probably not what you paid; it may not even be close. You are sitting on the same plane, traveling to the same destination, eating the same peanuts'—yet the prices you and your row mate paid for your tickets may not even have the same number of digits.

The basic challenge for the airline industry is to separate business travelers, who are willing to pay a great deal for a ticket, from pleasure travelers, who are on tighter budgets. If an airline sells every ticket at the same price, the company will leave money on the table no matter what price it chooses. A business traveler may be willing to pay $1,800 to fly round trip from Chicago to San Francisco; someone flying to cousin Irv's wedding will shell out no more than $250. If the

airline charges the high fare, it will lose all of its pleasure travelers. If it charges the low fare, it will lose all tire profits that business travelers would have been willing to pay. What to do? Learn to distinguish business travelers from pleasure travelers and then charge each of them a different fare.

The airlines are pretty good at this. Why will your fare drop sharply if you stay over a Saturday night? Because Saturday night is when you are going to be dancing at cousin Irv's wedding. Pleasure travelers usually spend the weekend at their destination, while business travelers almost never do. Buying the ticket two weeks ahead of time will be much, much cheaper than buying it eleven minutes before the flight leaves. Vacationers plan ahead while business travelers tend to buy tickets at the last minute. Airlines are the most obvious example of price discrimination, but look around and you will start to see it everywhere. A1 Gore complained during the 2000 presidential campaign that his mother and his dog were taking the same arthritis medication but that his mother paid much more for her prescription. Never mind that he made up the story after reading about the pricing disparity between humans and canines. The example is still perfect. There is nothing surprising about the fact that the same medicine will be sold to dogs and people at different prices. It's airline seats all over again. People will pay more for their own medicine than they will for their pet's. So the profit-maximizing strategy is to charge one price for patients with two legs and another price for patients with four.

Price discrimination will become even more prevalent as technology enables firms to gather more information about their customers. It is now possible, for example, to charge different prices to customers ordering on-line rather than over the phone. Or, a firm can charge different prices to different on-line customers depending on the pattern of their past purchases. The logic behind firms like Priceline (a website where consumers bid for travel services) is that every customer could conceivably pay a different price for an airline ticket or hotel room. In an article entided "How Technology Tailors Price Tags," the *Wall Street Journal*

noted, "Grocery stores appear to be the model of one price for all. But even today, they post one price, charge another to shoppers willing to clip coupons and a third to those with frequent-shopper cards that allow stores to collect detailed data on buying habits."[7]

What can we infer from all of this? Consumers try to make themselves as well off as possible and firms try to maximize profits. Those are seemingly simple concepts, yet they can tell us a tremendous amount about how the world works.

The market economy is a powerful force for making our lives better. The only way firms can make profits is by delivering goods that we want to buy. They create new products—everything from thermal coffee mugs to lifesaving antibiotics. Or they take an existing product and make it cheaper or better. This kind of competition is fabulously good for consumers. In 1900, a three-minute phone call from New York to Chicago cost $5.45, the equivalent of about $140 today. Now the same call is essentially free if you have a mobile phone with unlimited minutes. Profit inspires some of our greatest work, even in areas like higher education, the arts, and medicine. How many world leaders fly to North Korea when they need open-heart surgery?

At the same time, the market is amoral. Not immoral, simply amoral. The market rewards scarcity, which has no inherent relation to value. Diamonds are worth thousands of dollars a carat while water (if you are bold enough to drink it out of the tap) is nearly free. If there were no diamonds on the planet, we would be inconvenienced; if all the water disappeared, we would be dead. The market does not provide goods that we need; it provides goods that *we want to buy.* This is a crucial distinction. Our medical system does not provide health insurance for the poor. Why? Because they can't pay for it. Our most talented doctors do provide breast enhancements and face-lifts for Hollywood stars. Why? Because they can pay for it. Meanwhile, firms can make a

lot of money doing nasty things. Why do European crime syndicates kidnap young girls in Eastern Europe and sell them into prostitution in wealthier countries? Because it's profitable.

In fact, criminals are some of the most innovative folks around. Drug traffickers can make huge profits by transporting cocaine from where it is produced (in the jungles of South America) to where it is consumed (in the cities and towns across the United States). This is illegal, of course; U.S. authorities devote a great amount of resources to interdicting the supply of such drugs headed toward potential consumers. As with any other market, drug runners who find clever ways of eluding the authorities are rewarded with huge profits.

Customs officials are pretty good at sniffing out (literally in many cases) large caches of drags moving across the border, so drug traffickers figured out that it was easier to skip the border crossings and move their contraband across the sea and into the United States using small boats. When the U.S. Coast Guard began tracking fishing boats, drug traffickers invested in "go fast" boats that could outran the authorities. And when U.S. law enforcement adopted radar and helicopters to hunt down the speedboats, the drug runners innovated yet again, creating the trafficking equivalent of Velcro or the iPhone: homemade submarines. In 2006, the Coast Guard stumbled across a forty-nine-foot submarine—-handmade in the jungles of Colombia—that was invisible to radar and equipped to carry four men and three tons of cocaine. In 2000, Colombian police raided a warehouse and discovered a one-hundred-foot submarine under construction that would have been able to carry two hundred tons of cocaine. Coast Guard Rear Admiral Joseph Nimmich told the *New York Times,* "Like any business, if you're losing more and more of your product, you try to find a different way."[8]

The market is like evolution; it is an extraordinarily powerful force that derives its strength from rewarding the swift, the strong, and the smart. That said, it would be wise to remember that two of the most beautifully adapted species on the planet are the rat and the cockroach.

Our system uses prices to allocate scarce resources. Since there is a finite amount of everything worth having, the most basic function of any economic system is to decide who gets what. Who gets tickets to the Super Bowl? The people who are willing to pay the most. Who had the best seats for the Supreme Soviet Bowl in the old USSR (assuming some such event existed)? The individuals chosen by the Communist Party. Prices had nothing to do with it. If a Moscow butcher received a new shipment of pork, he slapped on the official state price for pork. And if that price was low enough that he had more customers than pork chops, he did not raise the price to earn some extra cash. He merely sold the chops to the first people in line. Those at the end of the line were out of luck. Capitalism and communism both ration goods. We do it with prices; the Soviets did it by waiting in line. (Of course, the communists had many black markets; it is quite likely that the butcher sold extra pork chops illegally out the back door of his shop.)

Because we use price to allocate goods, most markets are self-correcting. Periodically the oil ministers from the OPEC nations will meet in an exotic locale and agree to limit the global production of oil. Several things happen shortly thereafter: (1) Oil and gas prices start to go up; and (2) politicians begin falling all over themselves with ideas, mostly bad, for intervening in the oil market. But high prices are like a fever; they are both a symptom and a potential cure. While politicians are puffing away on the House floor, some other crucial things start to happen. We drive less. We get one heating bill and decide to insulate the attic. We go to the Ford showroom and walk past the Expeditions to the Escorts.

When gas prices approached $4 a gallon in 2008, the rapid response of American consumers surprised even economists. Americans began buying smaller cars (SUV sales plunged while subcompact sales rose). We drove fewer total miles (the first monthly drop in 30 years). We climbed on public buses and trains, often for the first time; transit

ridership was higher in 2008 than at any time since the creation of the interstate highway system five decades earlier.[9]

Not all such behavioral changes were healthy. Many consumers switched from cars to motorcycles, which are more fuel efficient but also more dangerous. After falling steadily for years, the number of U.S. motorcycle deaths began to rise in the mid-1990s, just as gas prices began to climb. A study in the *American Journal of Public Health* estimated that every $1 increase in the price of gasoline is associated with an additional 1,500 motorcycle deaths annually.[10]

High oil prices cause things to start happening on the supply side, too. Oil producers outside of OPEC start pumping more oil to take advantage of the high price; indeed, the OPEC countries usually begin cheating on their own production quotas. Domestic oil companies begin pumping oil from wells that were not economical when the price of petroleum was low. Meanwhile, a lot of very smart people begin working more seriously on finding and commercializing alternative sources of energy. The price of oil and gasoline begins to drift down as supply rises and demand falls.

If we fix prices in a market system, private firms will find some other way to compete. Consumers often look back nostalgically at the "early days" of airplane travel, when the food was good, the seats were bigger, and people dressed up when they traveled. This is not just nostalgia speaking; the quality of coach air travel has fallen sharply. But the price of air travel has fallen even faster. Prior to 1978, airline fares were fixed by the government. Every flight from Denver to Chicago cost the same, but American and United were still competing for customers. They used quality to distinguish themselves. When the industry was deregulated, price became the primary margin for competition, presumably because that is what consumers care more about. Since then, everything related to being in or near an airplane lias become less pleasant, but the average fare, adjusted for inflation, lias fallen by nearly half.

In 1995,1 was traveling across South Africa, and I was struck by the remarkable service at the gas stations along the way. The attendants, dressed in sharp uniforms, often with bow ties, would scurry out to fill the tank, check the oil, and wipe the windshield. The bathrooms were spotless—a far cry from some of the scary things I've seen driving across the USA. Was there some special service station mentality in South Africa? No. The price of gasoline was fixed by the government. So service stations, which were still private firms, resorted to bow ties and clean bathrooms to attract customers.

Every market transaction makes all parties better off. Firms are acting in their own best interests, and so are consumers. This is a simple idea that has enormous power. Consider an inflammatory example: The problem with Asian sweatshops is that there are not enough of them. Adult workers take jobs in these unpleasant, low-wage manufacturing facilities voluntarily. (I am not writing about forced labor or child labor, both of which are different cases.) So one of two things must be true. Either (1) workers take unpleasant jobs in sweatshops because it is the best employment option they have; or (2) Asian sweatshop workers are persons of weak intellect who have many more attractive job offers but choose to work in sweatshops instead.

Most arguments against globalization implicitly assume number two. The protesters smashing windows in Seattle were trying to make the case that workers in the developing world would be better off if we curtailed international trade, thereby closing down the sweatshops that churn out shoes and handbags for those of us in the developed world. But how exactly does that make workers in poor countries better off? It does not create any new opportunities. The only way it could possibly improve social welfare is if fired sweatshop workers take new, better jobs—opportunities they presumably ignored when they went to work in a sweatshop. When was the last time a plant closing in the United States was hailed as good news for its workers?

Sweatshops are nasty places by Western standards. And yes, one

might argue that Nike should pay its foreign workers better wages out of sheer altruism. But they are a symptom of poverty, not a cause. Nike pays a typical worker in one of its Vietnamese factories roughly $600 a year. That is a pathetic amount of money. It also happens to be twice an average Vietnamese worker's annual income." Indeed, sweatshops played an important role in the development of countries like South Korea and Taiwan, as we will explore in Chapter 12.

Given that economics is built upon the assumption that humans act consistently in ways that make themselves better off, one might reasonably ask: Are we really that rational? Not always, it turns out. One of the fiercest assaults on the notion of "strict rationality" comes from a seemingly silly observation. Economist Richard Thaler hosted a dinner party years ago at which he served a bowl of cashews before the meal. He noticed that his guests were wolfing down the nuts at such a pace that they would likely spoil their appetite for dinner. So Thaler took the bowl of nuts away, at which point his guests thanked him.[12]

Believe it or not, this little vignette exposes a fault in the basic tenets of microeconomics: In theory, it should never be possible to make rational individuals better off by denying them some option. People who don't want to eat too many cashews should just stop eating cashews. But they don't. And that finding turns out to have implications far beyond salted nuts. For example, if humans lack the self-discipline to do things that they know will make themselves better off in the long run (e.g., lose weight, stop smoking, or save for retirement), then society could conceivably make them better off by helping (or coercing) them to do things they otherwise would not or could not do—the public policy equivalent of taking the cashew bowl away.

The field of behavioral economics has evolved as a marriage between psychology and economics that offers sophisticated insight into how humans really make decisions. Daniel Kahneman, a professor in both psychology and public affairs at Princeton, was awarded the Nobel Prize in Economics in 2002 for his studies of decision

making under uncertainty, and, in particular, "how human decisions may systematically depart from those predicted by standard economic theory.'"[3]

Kahneman and others have advanced the concept of "bounded rationality," which suggests that most of us make decisions using intuition or rules of thumb, kind of like looking at the sky to determine if it will rain, rather than spending hours poring over weather forecasts. Most of the time, this works just fine. Sometimes it doesn't. The behavioral economists study ways in which these rules of thumb may lead us to do things that diminish our utility in the long run.

For example, individuals don't always have a particularly refined sense of risk and probability. This point was brought home to me recently as I admired a large Harley Davidson motorcycle parked on a sidewalk in New Hampshire (a state that does not require motorcycle helmets). The owner ambled up and said, "Do you want to buy it?" I replied that motorcycles are a litde too dangerous for me, to which he exclaimed, "You're willing to fly on a plane, aren't you!"

In fact, riding a motorcycle is 2,000 times more dangerous than flying for every kilometer traveled. That's not an entirely fair comparison since motorcycle trips tend to be much shorter. Still, any given motorcycle journey, regardless of length, is 14 times more likely to end in death than any trip by plane. Conventional economics makes clear that some people will ride motorcycles (with or without helmets) because the utility they get from going fast on a two wheeler outweighs the risks they incur in the process. That's perfectly rational. But if the person making that decision doesn't understand the true risk involved, then it may not be a rational trade-off after all.

Behavorial economics has developed a catalog of these kinds of potential errors, many of which are an obvious part of everyday life. Many of us don't have all the self-control that we would like. Eighty percent of American smokers say they want to quit; most of them don't. (Reports from inside the White House suggested that President Obama was still trying to kick the habit even after moving into the

Oval Office.) Some very prominent economists, including one Nobel Prize winner, have argued for decades that there is such a thing as "rational addiction," meaning that individuals will take into account the likelihood of addiction and all its future costs when buying that first pack of Camels. MIT economist Jonathan Gruber, who has studied smoking behavior extensively, thinks that is nonsense. He argues that consumers don't rationally weigh the benefits of smoking enjoyment against future health risks and other costs, as the standard economic model assumes. Gruber writes, "The model is predicated on a description of the smoking decision drat is at odds with laboratory evidence, the behavior of smokers, econometric [statistical] analysis, and common sense."[14]

We may also lack the basic knowledge necessary to make sensible decisions in some situations. Annamaria Lusardi of Dartmouth College and Olivia Mitchell of the Wharton School at the University of Pennsylvania surveyed a large sample of Americans over the age of fifty to gauge their financial literacy. Only a third could do simple interest rate calculations; most did not understand the concept of investment diversification. (If you don't know what that means either, you will after reading Chapter 7.) Based on her research, Professor Lusardi has concluded that "financial illiteracy" is widespread.[15]

These are not merely esoteric fun facts that pipe-smoking academic, like to kick around in the faculty lounge. Bad decisions can have bad outcomes—for all of us. The global financial crisis arguably has its roots in irrational behavior. One of our behavioral "rules of thumb" as humans is to see patterns in what is really randomness; as a result, we assume that whatever is happening now will continue to happen in the future, even when data, probability, or basic analysis suggest the contrary. A coin that comes up heads four times in a row is "lucky"; a basketball player who has hit three shots in a row has a "hot hand."

A team of cognitive psychologists made one of the enduring contributions to this field by disproving the "hot hand" in basketball using NBA data and by conducting experiments with the Cornell varsity

men's and women's basketball teams. (This is the rare academic paper that includes interviews with the Philadelphia 76ers.) Ninety-one percent of basketball fans believe that a player has "a better chance of making a shot after having just made his last two or three shots than he does after having just missed his last two or three shots." In fact, there is no evidence that a player's chances of making a shot are greater after making a previous shot—not with field goals for the 76ers, not with free throws for the Boston Celtics, and not when Cornell players shot baskets as part of a controlled experiment.[16]

Basketball fans are surprised by that—just as many homeowners were surprised in 2006 when real estate prices stopped going up. Lots of people had borrowed a lot of money on the assumption that what goes up must keep going up; the result has been a wave of foreclosures with devastating ripple effects throughout the global economy—which is a heck of a lot more significant than eating too many cashews. Chapter 3 discusses what, if anything, public policy ought to do about our irrational tendencies.

As John F. Kennedy famously remarked, "Life is not fair." Neither is capitalism in some important respects. Is it a good system?

I will argue that a market economy is to economics what democracy is to government: a decent, if flawed, choice among many bad alternatives. Markets are consistent with our views of individual liberty. We may disagree over whether or not the government should compel us to wear motorcycle helmets, but most of us agree that the state should not tell us where to live, what to do for a living, or how to spend our money. True, there is no way to rationalize spending money on a birthday cake for my dog when the same money could have vaccinated several African children. But any system that forces me to spend money on vaccines instead of doggy birthday cakes can only be held together by oppression. The communist governments of the twentieth century controlled their economies by controlling their citizens' lives. They often wrecked both in the process. During the

twentieth century, communist governments killed some 100 million of their own people in peacetime, either by repression or by famine.

Markets are consistent with human nature and therefore wildly successful at motivating us to reach our potential. I am writing this book because I love to write. I am writing this book because I believe that economics will be interesting to lay readers. And I am writing this book because I really want a summer home in New Hampshire. We work harder when we benefit directly from our work, and that hard work often yields significant social gains.

Last and most important, we can and should use government to modify markets in all kinds of ways. The economic battle of the twentieth century was between capitalism and communism. Capitalism won. Even my leftist brother-in-law does not believe in collective farming or government-owned steel mills (though he did once say that he would like to see a health care system modeled after the U.S. Post Office). On the other hand, reasonable people can disagree sharply over when and how the government should involve itself in a market economy or what kind of safety net we should offer to those whom capitalism treats badly. The economic battles of the twenty-first century will be over how unfettered our markets should be.